

a contact hole, located between the two conductor patterns, reaching the base substrate through the first insulation film, wherein an end of the contact hole is positioned on the etching stopper film; and

a sidewall insulation film formed on an inner wall of the first insulation film, each side wall of the two conductor patterns, and each side wall of the etching stopper film in the contact hole,

the contact hole having a first width which is larger than a space between the two conductor patterns at a top of the contact hole and a second width which is substantially the same as a width subtracted twice a width of the sidewall insulation film from the space between the two conductor patterns at the bottom of the contact hole.--

REMARKS

Claims 1-14, 36 and 37 are pending in this application. By this Amendment, claims 1, 2, 9, 11, 12 and 36 have been amended, new claim 37 has been added and claim 35 has been canceled without prejudice or disclaimer. The applicant respectfully submits that no new matter has been added. It is believed that this Response is fully responsive to the Office Action dated June 30, 2000.

The courtesy extended by Examiner Warren during the October 16, 2000 interview is gratefully acknowledged. The substance of discussions during the interview are incorporated into the following remarks.

Claims Rejection Under 35 U.S.C. §103

Claims 1-14, 35 and 36 are rejected under 35 U.S.C. §103(a) as being unpatentable over **Hiroshi** (JP 08-037171(A)).

This rejection is respectfully traversed.

Independent Claim 1:

Claim 1 recites that each of said etching stopper films is completely covered by said first insulation film and said respective sidewall insulation film. **Hiroshi** fails to disclose or fairly suggest this feature. Instead, as shown in Figs. 1 and 2 of **Hiroshi**, only one and not both of the etching stopper films 6 is covered by insulation film 2 and sidewall insulation film 11.

In other words, **Hiroshi** fails to disclose that each of the etching stopper films 6 is completely covered by the first insulation film 2 and the respective sidewall insulation film 11.

Independent Claims 2 and 12:

Claims 2 and 12 call for a insulation film which fills the spaces between the plurality of conductor patterns and does not extend over the etching stopper film. Based on this feature, according to the present invention, micronized contact holes can be formed without forming micronized photoresist pattern (see, e.g., page 27, line 9 - page 38, line 8 of the specification of the present application).

Hiroshi discloses the insulation film 2 which fills the space between the two conductor patterns 2 (see, e.g., FIG. 1 of Hiroshi). However, in Hiroshi, the insulation film 2 extends over the etching stopper film 6 (see, e.g., FIG. 1 of Hiroshi). Hiroshi neither teaches nor suggests that the insulation film does not extend over the etching stopper film.

Thus, Hiroshi is clearly different from the claimed invention and does not provide any motivation for the present invention.

Independent Claims 9, 11 and 37:

Claims 9, 11 and 37 call for a contact hole that has at a top of the contact hole a first width which is larger than a space between the two conductor patterns, and at a bottom of the contact hole a second width which is substantially the same as a width subtracted twice a width of the sidewall insulation film from the space between the two conductor patterns. Based on this feature, the present invention can provide the useful effect that the size of the contact hole does not change even when disalignment takes place in the lithography step for opening the contact hole (see First Embodiment of the present application).

On the other hand, in Hiroshi, a width at a top of the contact hole 9 is smaller than a space between the two conductor patterns 5. A width at a bottom of the contact hole 9 is smaller than a width subtracted twice a width of the sidewall insulation film 10, 11 or 12 from the space between

the two conductor patterns 5 (see, e.g., FIG. 1 of Hiroshi). The above described effect can not be achieved by the constitution of Hiroshi.

Thus, Hiroshi is clearly different from the claimed invention and does not provide any motivation for the present invention.

Independent Claim 36:

Claim 36 have one feature that the end of the contact hole is defined by four sides including a first pair of sides which are opposed to each other and a second pair of sides which are opposed to each other, the first pair of sides is defined by the conductor patterns, and the second pair of sides is defined by the first insulation film. Based on the feature, the present invention can provide the useful effect that the size of the contact hole does not change even when disalignment takes place in the lithography step for opening the contact holes (see First Embodiment of the present application).

On the other hand, in Hiroshi, opposed sides which define the end of the contact hole includes first side defined by the conductor pattern 5 (left side of FIG. 1 of Hiroshi) and second side defined by the insulation film 2 (right side of FIG.1 of Hiroshi). The above described effect can not be achieved by the constitution of Hiroshi

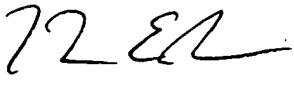
Thus, Hiroshi is clearly different from the claimed invention and does not provide any motivation for the present invention.

Thus, it is respectfully asserted that the prior art fails to teach or suggest recitations of claims 1-14, 36 and 37 requested that the Examiner allow these claims, along with the entire application, to issue. Accordingly, withdrawal of the rejection of claims 1-14 and 36 under 35 U.S.C. §103(a) is respectfully solicited.

In the event that this paper is not timely filed, applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,

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